# *PERCEPTION® MAT-PAC*

Tool Room Control

A Training Tutorial

This training tutorial outlines the basic features of the *PERCEPTION* system for managing tools.

It is a supplement to the user manual entitled "*PERCEPTION Material Planning, Purchasing & Inventory Control,*" which provides more details for the user.

Before using this tutorial, the user should first view the preliminary *PERCEPTION* training tutorial, "Getting Started."
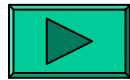
Training Directory
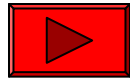
▶ **Continue**

▶ **Tool Types**

▶ **Tool Catalog**

▶ **Tool Locations**

▶ **Tool Manufacturers**

▶ **Transactions**

▶ **Posting**

▶ **Reporting**

▶ **Remote Bar Code Transactions**

*PERCEPTION* provides features for managing the shipyard's tool room.

The system provides a __tool room catalog__ where tools can be classified by type.

Tools then can be checked in and out.

Tools remaining checked out are tracked by the system.

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To reach the system's tool management functions, click on *Environment/Stores Management/Tool Management Center* **from the main menu.**

The system will display the various features of the Tool Management Center:
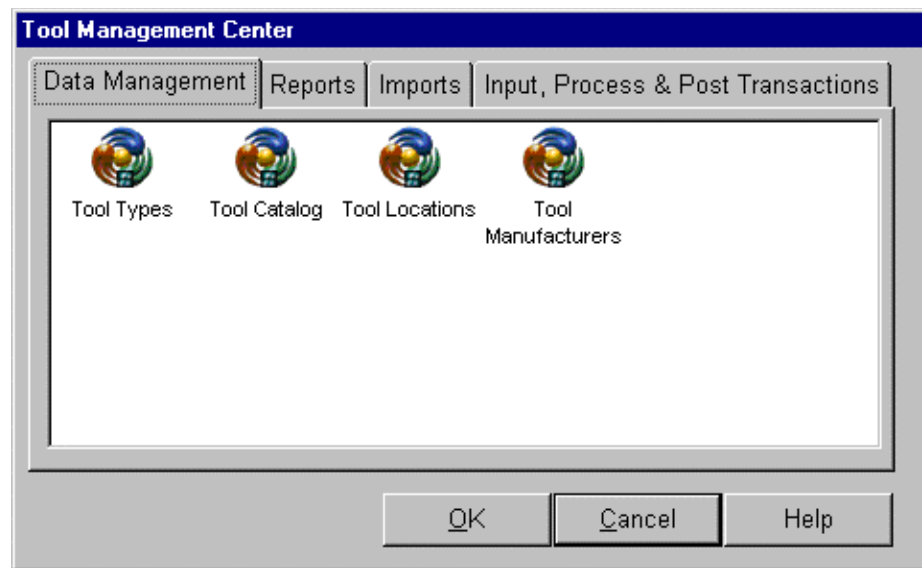
The Tool Management Center window groups tool room functions into the following <u>tab windows</u>:

1. **Data Management**
2. **Reports**
3. **Imports of data from remote bar code scanning devices**
4. **Input, process & posting tool room usage transactions**

<u>Note</u>: **The icons of the Tool Management Center can be exercised using a touch screen monitor by double "clicking" with the finger on the icon to open its window.**

Data Management

Data Management provides all of the means for defining the tool catalog.

The Tool Catalog is the primary basis for defining the tools to be managed by the system.

There are supplemental database tables that can be used in the cataloging process.

The following describes these tables in more detail.

Tool Types (Optional)

The tool type allows the separation of tools into categories. Power drills, for example, may be broken down by the specification of a tool type: electric, or air powered.

Tool types enable the tool room manager to define tools under user-defined class categories. These categories can help the manager locate tools more easily on the database.

If tool types are to be used, they must be defined <u>before</u> the actual tools are defined on the database.

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To open the Tool Type worksheet, <u>double click</u> on the Tool Type icon, and the system will display the worksheet:

	Tool Type	Tool Class	Heading
1	(NONE)	(NONE)	Default Type And Class. Do NOT Delete.
2	Blowers & Ventilators	Blowers & Ventilators	Blowers & Ventilators
3	Calibration Equipment	Calibration Equipment	Calibration Equipment
4	Caulking Guns	Caulking Guns	Caulking Guns
5	Combination Kits	Combination Kits	Combination Kits
6	Compressors	Compressors	Compressors
7	Dremel Tools	Dremel Tools	Dremel Tools
8	Drills	Cordless Drills	Cordless Drills
9	Drills	Drill Bit Indexes	Drill Bit Indexes
10	Drills	Drill Bit Sharpeners	Drill Bit Sharpeners
11	Drills	Drill Bits	Drill Bits
12	Drills	Drill Presses	Drill Presses
13	Drills	Electric Drills	Electric Drills
14	Drills	Hammer Drills	Hammer Drills
15	Gauges & Monitoring Equipment	Gauges & Monitoring Equipment	Gauges & Monitoring Equipment
16	Grinders & Scalers	Die Grinders	Die Grinders
17	Grinders & Scalers	Pneumatic Grinders	Pneumatic Grinders
18	Grinders & Scalers	Pneumatic Scalers	Pneumatic Scalers
19	Hammers	Claw Hammers	Claw Hammers
20	Hammers	Demolition Hammers	Demolition Hammers
21	Hammers	Rotary Hammers	Rotary Hammers
22	Heat Guns	Heat Guns	Heat Guns
23	Hoists & Lifts	Cherry Pickers	Cherry Pickers
24	Hoists & Lifts	Electric Hoists	Electric Hoists
25	Hoists & Lifts	Fork Lifts	Fork Lifts
26	Hoists & Lifts	Hand, Chain, & Cable Hoists	Hand, Chain, & Cable Hoists
27	Hoses	Hoses - Pneumatic	Hoses - Pneumatic
28	Hoses	Hoses - Water	Hoses - Water
29	Hoses	Hoses - Welding Gas	Hoses - Welding Gas
30	Measuring Devices	Levels	Levels
31	Measuring Devices	Squares	Squares
32	Measuring Devices	Tapes Measures	Tapes Measures
33	Multiple Tool Sets	Multiple Tool Sets	Multiple Tool Sets

Types of Tools

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The Tool Type worksheet carries the following information:

1. **Tool Type (maximum 50 characters)**
2. **Tool Class (maximum 50 characters)**
3. **Tool Type Description (maximum 40 characters)**

The Tool Class is an optional sub-category of Tool Type.

The procedures for retrieving, adding, changing and deleting tool types are the same as outlined in *General System Operation, "Getting Started With PERCEPTION."*

Tool Type data can be imported (see *Importing & Exporting Data, "Getting Started With PERCEPTION*).

Changing Tool Types

When a user changes a tool type, this change will have the effect of cascading that change throughout the system.

For example, changing a tool type of "ar" to "air" will update all tools identified by type "ar" to now be of type "air."

Tool Catalog

The Tool Catalog is the database file where all tools are defined and managed by the system.

To open the Tool Catalog worksheet, double click on the Tool Catalog icon, and the system will display the worksheet:

Tool ID	Tool Type	Tool Class	Part ID	Description	Serial Number	V
TR-0001	Multiple Tool Sets	Multiple Tool Sets		135 PC Tool Set w/Case	SER-0001	A-108
TR-0002	Wrenches	Socket Wrenches		Set, 75 PC Socket Tool Set	SER-0001	A-108
TR-0003	Wrenches	Socket Wrenches		Set, 20 PC 3/8" Drive Socket Wrenches	SER-0001	A-108
TR-0004	Wrenches	Socket Wrenches		Set, 121 PC Metric/Standard Combination Drive	SER-0001	A-108
TR-0005	Wrenches	Flat Wrenches		Combo Set, 12 PC Std/Metric wrench set	SER-0001	A-108
TR-0006	Wrenches	Flat Wrenches		Combo Set, 14 PC Std wrench set	SER-0001	A-108
TR-0007	Wrenches	Flat Wrenches		Combo Set, 14 PC Metric wrench set	SER-0001	A-108
TR-0008	Wrenches	Flat Wrenches		Combo Set 6 PC Std wrench set		A-108
TR-0009	Wrenches	Flat Wrenches		Combo Set, 6 PC Metric wrench set		A-108
TR-0010	Wrenches	Flat Wrenches		Gear, 5/16" Gear Wrench		A-108
TR-0011	Wrenches	Flat Wrenches		Open End, 3/8" x 7/16" wrench		A-108
TR-0012	Wrenches	Flat Wrenches		Combo, 7/16" Wrench		A-108
TR-0013	Wrenches	Flat Wrenches		Open End, 3/4" x 7/8" wrench		A-108
TR-0014	Wrenches	Flat Wrenches		Combo, 11/31" wrench		A-108
TR-0015	Wrenches	Flat Wrenches		Combo Set, 11 PC SAE wrench set		A-108
TR-0016	Wrenches	Adjustable Wrenches		Locking, 10" Adjustable Wrench		A-108
TR-0017	Wrenches	Adjustable Wrenches		Crescent, 4" Adjustable Wrench		A-108
TR-0018	Wrenches	Adjustable Wrenches		Crescent, 6" Adjustable Wrench		A-108
TR-0019	Wrenches	Adjustable Wrenches		Vise Grip, 10" Locking Wrench		A-108
TR-0020	Measuring Devices	Tapes Measures		Tape Rule, 1" x 25' Stanley		A-108
TR-0021	Measuring Devices	Tapes Measures		Tape Rule, 1" x 25' Stanley Powerlock		A-108
TR-0022	Measuring Devices	Levels		Level, aluminum 48"		A-108
TR-0023	Measuring Devices	Levels		Level, Stanley torpedo 8"		A-108
TR-0024	Measuring Devices	Levels		Level, aluminum 18"		A-108

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The following information initially defines each tool for cataloging onto the *PERCEPTION* database:

- **Tool ID** (maximum 50 characters)
- **Tool Type** (maximum 50 characters)
- **Tool Class** (maximum 50 characters)
- **Part ID** (maximum 25 characters)
- **Serial Number** (maximum 25 characters)
- **Description** (unlimited). When using Part ID from the Parts Catalog, the system will automatically insert the Parts Catalog description into the tool description. The user may then modify the description to suit a more appropriate description for the specific tool
- **Vendor ID** (maximum 8 characters) for purchasing a tool replacement
- **Manufacturer ID** (maximum 25 characters). The name of the manufacturer can be entered directly in this worksheet, or manufacturer names can be managed centrally in the Manufacturers worksheet
- **Purchase Cost**
- **Purchase Date**
- **Barcode Label** (maximum of 50 characters)

To uniquely identify each tool, the <u>Tool ID</u> for each must be unique.

The Part ID and Serial Number are optional.

The Part ID may be used for cataloging the tool in the Parts Catalog for re-purchasing standard items purposes.

Note: The *Barcode Label* is useful when pre-printed labels are used as an independent tool identifier.

This label must be unique for any tool managed on the database. It may be replaced with another label without losing existing tool information.

All check-out and check-in transactions require the Bar Code Label be identified for the tool being processed.

The worksheet also provides current status of the tool:

1. **Current Status (In, Out, Lost, Damaged, or Inactive)**
2. **Date of Status**
3. **Current Location (Optional)**
4. **Last User**
5. **Last Date Used**

The Current Status, Date of Status, Current Location, Last User, and Last Date Used are all data provided when tool check-in/check-out transactions are entered into the system.

Tool Locations (Optional)

The Tool Locations is the database file where all locations for tools are defined and managed by the system.

Locations include <u>both</u> where the tools are stored in the tool room and where the tools are destined when checked out.

To open the Tool Location worksheet, <u>double click</u> on the Tool Location icon, and the system will display the worksheet:

	Tool Location	Heading
	$ Tool Worksheet	
1	Berth	Building Berth
2	Off Site	
3	Outfit Shop	Outfit Shop
4	Outside	Outside Equipment Area
5	Tool Room #1	Main Stores
6	Tool Room #2	Electronics Room

Location data can be imported (see *Importing & Exporting Data, "Getting Started With PERCEPTION*).

Note: Tool locations also will be added to this table automatically by the system when newly defined either in the Tool Catalog with the tool, or with a check-in/check-out transaction.

Tool Manufacturers

The Tool Manufacturers is the database file where all manufacturers for tools are defined and managed by the system.

To open the Tool Manufacturers worksheet, <u>double click</u> on the Tool Manufacturers icon, and the system will display the worksheet:

	Manufacturer	Heading
$ Tool Manufacturers		
1	Black & Decker	Black & Decker
2	Stanley	Stanley

Manufacturer data can be imported (see *Importing & Exporting Data, "Getting Started With PERCEPTION*).

Tool Transactions

The transactions supported by the tool room are:

1. Check-Out tool to user
2. Check-In tool from user

There are two methods for entering tool room issue and receiving transactions:

1. Direct manual entries into the transaction worksheet
2. Imported transactions from remote bar code data files

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Direct (Manual) Tool Room Transactions

Direct or manual entries of tool room transactions are made into the Tool Transaction Posting worksheet.

	Trans Code	Tool ID	Badge Num	Location	Trans Date	Trans Time	Comments	Transac
1	TWDRW	TR-0007	15	Outfit Shop	08/03/2001	10:19 AM		08/
2	TRECV	TR-0007		Tool Room #1	08/03/2001	10:24 AM		08/
3	TWDRW	TR-0001	12345	Off Site	08/03/2001	10:24 AM		08/
4	TWDRW	TR-0004	15	Berth	08/03/2001	10:27 AM		08/

Tool Transaction Posting

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Each transaction must be coded as follows:

1. **TWDRW for tool checkouts (withdraws)**
2. **TRECV for tool returns (receiving)**

At a minimum, each transaction must record the following information:

1. **Transaction Code (TWDRW or TRECV)**
2. **Tool ID for the tool defined on the Tool Catalog**
3. **Badge Number of the person being issued the tool.**

If a tool return transaction, entry of the badge number is optional

Note: **Tool Checkout transactions require the badge number of the person being issued the tool.**

This badge number must be valid (and active) on the system's employee file (*Environment/Accounting/ Employees*).

Other information also <u>may</u> be provided:

1. **Location where the tool is being issued or where it is being stored in the tool room facility**
2. **Comments as necessary**

Imported
Tool Room Transactions

To import transactions from an external file, click on the *Imports* tab of the Tool Room Management Center.

The system will provide the window for the user to <u>select the import file in the network directories</u>.

The system accommodates several types of files for importing.
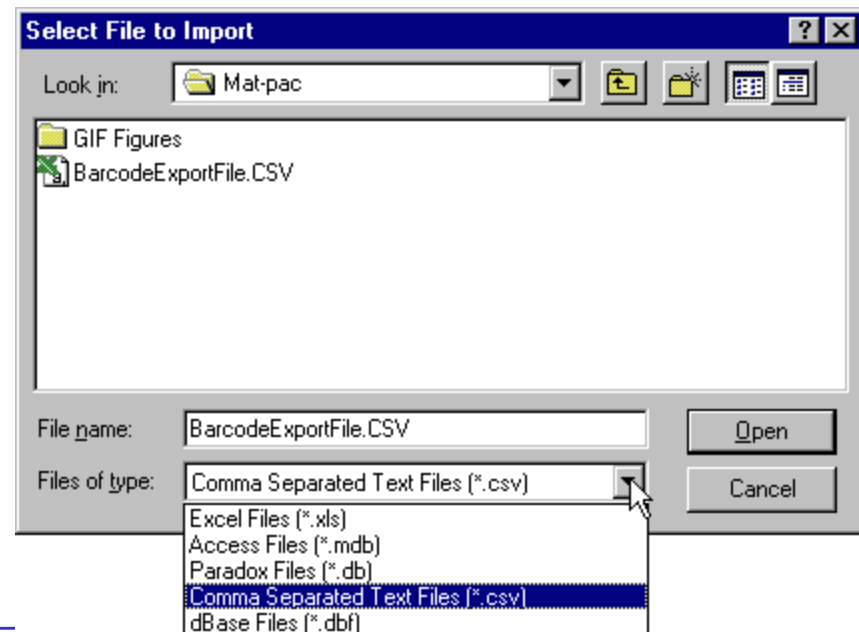
After the user has identified and opened the import file, the system will display the data-mapping window:

The mapping process allows the user to identify columns of the imported data file with columns in the Tool Room Transaction worksheet.

If the import file is expected to remain unaltered thereafter, the user can save this mapping by clicking on the *Save Column Map* box in this mapping window.

Note: The imported information required by the system is the same as required for the direct data entry method.

When the mapping is complete, click on the *OK* button. The system will proceed to import the transactions.

Click on the *Save* button on the toolbar, and the system will save all imported transactions to the same file as the direct transaction entries described in "Direct Tool Room Transactions."

Since all transactions are stored on the same file, the user can retrieve them into the direct Tool Room Transaction worksheet.

Posting Transactions

The system requires formal posting of tool room transactions, <u>both direct and imported</u>.

The posting process performs a <u>data validation</u> of the transactions to help ensure correct information is being entered.

The system color-codes each transaction as follows:

1. Gray - un-posted and non-validated transaction
2. **Red - un-posted and determined to have errors**
3. **Green - posted and successfully validated transaction**

To perform the posting process, highlight one or more transactions in the worksheet.

Then click on *Edit/Post Selected Transactions* from the main menu.

When the validation process has been completed, the color-coding will be initiated.

> **The transactions found in error will be color-coded red and the system will provide for the user appropriate errors messages.**
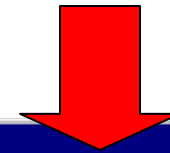
$ Tool Transaction Posting

me	Comments	Transaction Created	Created By	Posted Flag	Date Posted	Error Message	Impor
M		08/03/2001	spar	Yes	08/03/2001		
M		08/03/2001	spar	No	00/00/0000		
M		08/03/2001	spar	No	00/00/0000	No employee has the badge number speci	
M		08/03/2001	spar	Yes	08/03/2001		
M		08/03/2001	spar	No	00/00/0000	This tool is not available for usage.	

Note: **Transactions that have been successfully posted <u>cannot be modified</u>.**

Successfully posted transactions will not be re-posted by the system.

Tool Room Reports

The Tool Management Center offers a selection of reports that track tools and their status in the system.

Each report provides a selection window so that the user can narrow down the reported information to only those transactions that are of most interest.
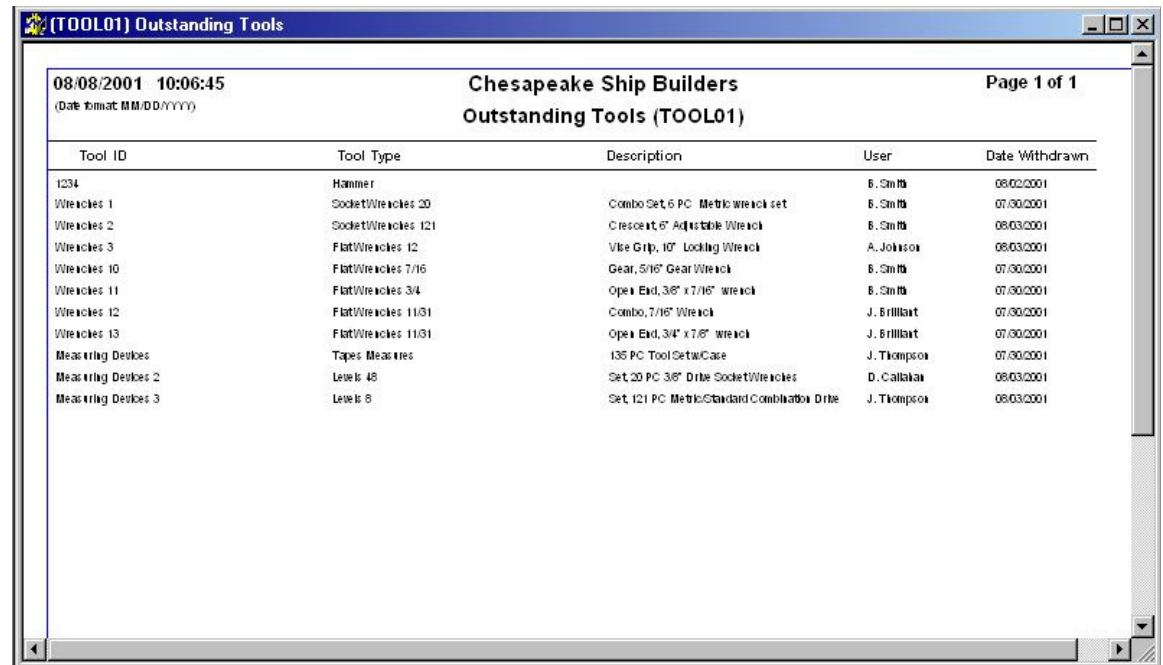
The user can generate these reports by clicking on the *Reports* tab of the Tool Management Center and then by clicking on the icon of the specific report of interest.
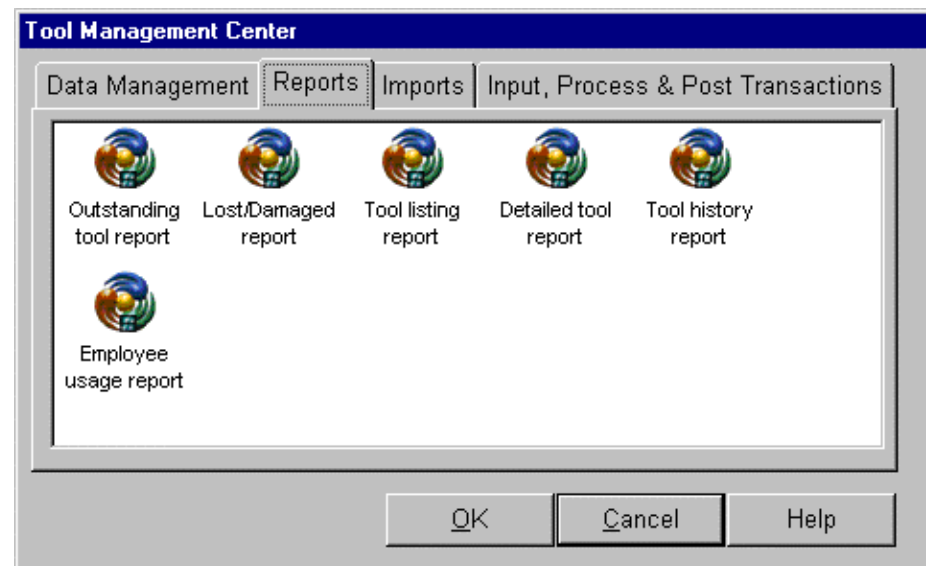
Outstanding Tools Report

The Outstanding Tool Report lists tools remaining checked-out and allows query by:

1. **Tools**
2. **Users**
3. **Usage Locations**

Lost & Damaged Tools Report

The Lost or Damaged Tool Report lists tools flagged by the user as lost or damaged and allows query by tool classification.

Tool Listing Report

The Tool Listing Report produces hard copies of the Tool Catalog.

Detail Tool Report

The Detailed Tool Report provides a basic description of the tool, its serial number, etc

Tool History Report

The Tool History Report lists all transactions logged for the tool, but allows query by:

- **Date range**
- **Tools**
- **Users**

Employee Usage Report

The Employee Usage Report lists all tool usage transactions by employee, but allows query by:

1. **Employee**
2. **Date range**

Tool Room Remote
Bar Code Transactions

The following describes the requirements for a remote bar code scanning device that is capable of generating the above transactions in a bulk data file that can be uploaded to the server and which then can be processed by *PERCEPTION*.

To support a bulk import of the data from these tool room transactions into PERCEPTION, the bar code scanner must create a file containing the following fields as a minimum of information:

1. Action – (Check In or Check Out)
2. User
3. Tool <u>Bar Code Label</u>
4. Date
5. Time

It should also be noted that for the check-in process, the user is irrelevant.

The system will determine who checked the tool out via query of its own table structure.

As with the other imports, this data is brought into the system and staged into a table to allow for data correction and error recovery in a reasonable fashion.